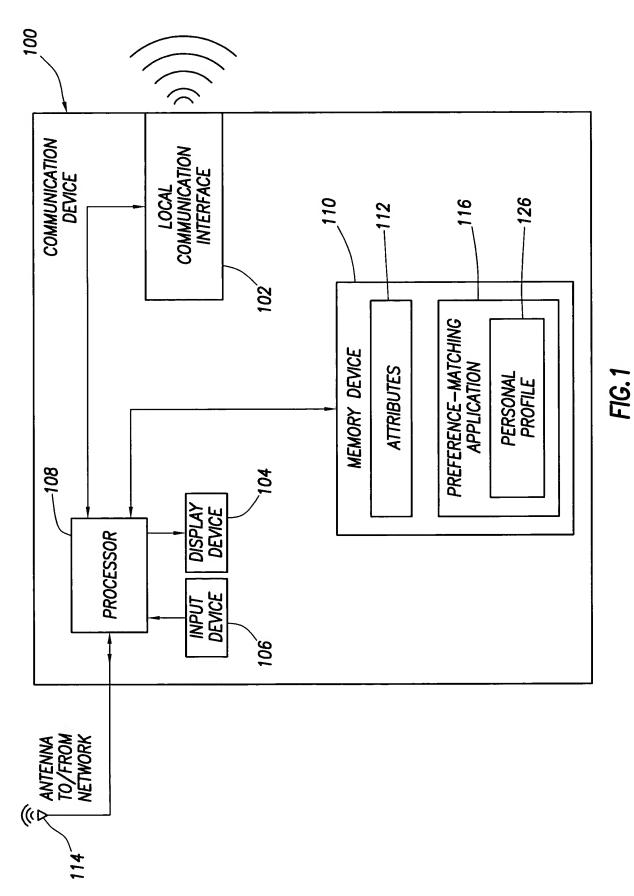
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Title: Encoded Attribute Matching On Communication Devices





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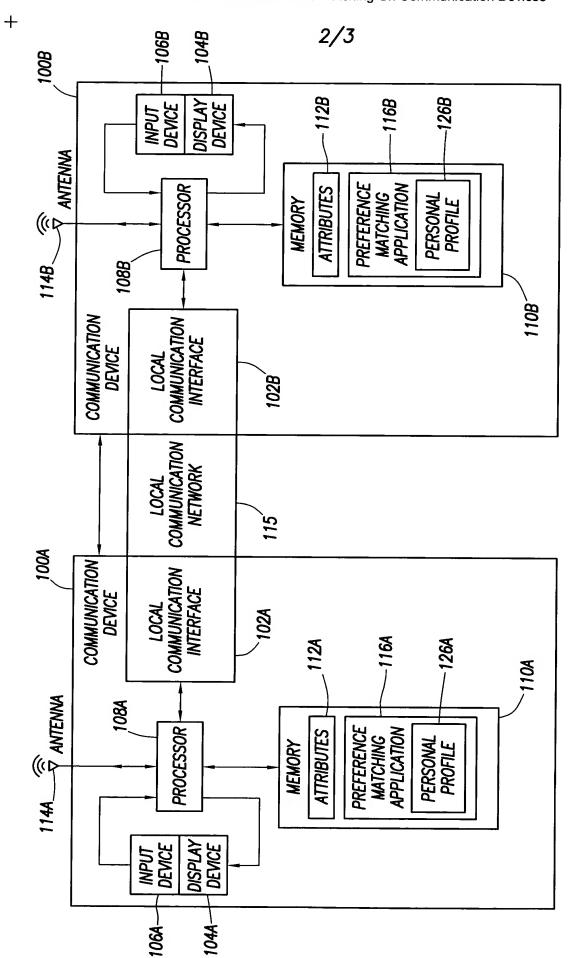


FIG. 2

Attorney Docket No. 200313922-1 (2162-17400) Applicants: Bernardo A. HUBERMAN et al. Title: Encoded Attribute Matching On Communication Devices 3/3 **START** FIG.3 *302* CELL PHONES 'A' AND 'B' IN DISCOVERABLE MODE 304 A DISCOVERS B 312 306 A INITIATES PREFERENCES MATCHING REQUEST WITH B **END** COMMUNICATION **B ACCEPTS?** 324 A COMPUTES NO. OF MATCHES WITH B BY COUNTING NO. OF COMMON A GENERATES SECRET KEY 'X' VALUES OF  $(T^{x})^{y}$  WITH VALUES OF  $(U^{y})^{x}$ , FOR EACH MATCH BETWEEN  $(T^{x})^{y}$  AND  $(U^{y})^{x}$ , TOTAL NO. OF MATCHES INCREASES BY ONE B GENERATES SECRET KEY 'Y' 326 B COMPUTES NO. OF MATCHES WITH A, FOR EACH OF A'S ATTRIBUTES A BY COUNTING NO. OF COMMON VALUES OF  $(U^y)^x$  WITH  $(T^x)^y$ , FOR 'T', COMPUTES TX AND SENDS TO B EACH MATCH BETWEEN (TX) Y AND  $(U^{y})^{x}$ , total no. of matches INCREASES BY ONE. B, FOR EACH OF B's ATTRIBUTES 'U', COMPUTES UY AND SENDS TO A ,328 USERS NOTIFIED OF MUTUAL PROXIMITY FOR EACH TX RECEIVED FROM A. *330* B COMPUTES (TX) AND SENDS TO A USERS NOTIFIED OF TOTAL NO. OF MATCHES FOR EACH UY RECEIVED FROM B. A COMPUTES  $(U^y)^x$  AND SENDS TO B

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308

310

314.

316

318

*320* .

322~

332

EACH USER PROMPTED FOR FURTHER **ACTION** 

**END**